

## **IN THE SPECIFICATION**

Insert the following starting at page 7, line 9:

### **BRIEF DESCRIPTION OF DRAWINGS**

Figure 1 illustrates the localization of mutations in Fermichamp *HXT3*.

Figure 2A illustrates the construction of V5 strains with integrated *HXT3* genes.

Figure 2B illustrates *HXT3* ORF cloning in multicopy plasmid p4H7.

Figure 3A shows glucose and fructose utilization by *HXT3* (V5 or Fmp) single copy gene expression. Figure 3B shows glucose/fructose ratio of *HXT3* (V5 or Fmp) single copy gene expression. Figure 3C shows fermentation rate of *HXT3* (V5 or Fmp) single copy gene expression. Figure 3D shows a comparison of glucose/fructose ratio between Fermichamp and *HXT3* (V5 or Fmp) single copy gene expression. Figure 3E shows a comparison of glucose/fructose ratio between Fermichamp, Ferminvin and *HXT3* Fmp single copy gene expression.

Figure 4 shows glucose and fructose utilization by multicopy *HXT3* (V5 or Fmp) overexpression. Figure 4B shows glucose/fructose ratio by multicopy *HXT3* (V5 or Fmp) overexpression.

Figure 5 shows fermentation rate of multicopy overexpression *HXT3* (V5 or Fmp) on glucose and fructose (50/50) must (200 g/l).

Figure 6A shows fermentation rate of multicopy overexpression *HXT3* (V5 or Fmp) on pure fructose must (200 g/l). Figure 6B shows fermentation rate of multicopy overexpression *HXT3* (V5 or Fmp) on pure glucose must (200 g/l).

Figure 7A shows fermentation rate of single copy expression *HXT3* (V5 or Fmp) on pure fructose must (200 g/l). Figure 7B shows fermentation rate of single copy expression *HXT3* (V5 or Fmp) on pure glucose must (200 g/l).

Figure 8 illustrates construction of strains containing single, inactive, *HXT3* gene.

Figure 9 illustrates construction of strains that comprising single, inactive, *HXT3* gene.

Figure 10 illustrates construction of strains expressing *HXT3* chimera.

Figure 11 illustrates expressed chimeric HTX3 proteins.

Figure 12 illustrates mutated HTX3 Fermichamp proteins.

Figure 13 shows glucose-fructose ratio evolution during alcoholic fermentation.

Figure 14 shows glucose-fructose ratio evolution during alcoholic fermentation.

Figure 15 shows glucose-fructose ratio evolution during alcoholic fermentation.

Figure 16 shows glucose-fructose ratio evolution during alcoholic fermentation.

Figure 17 shows glucose-fructose ratio evolution during alcoholic fermentation:

Replace the heading at page 9, line 1 with:

Table 2. Primers used for HXT3 integration in V5 HXT1-7 (SEQ ID NOS:1-8)

Replace the paragraph starting at page 14, line 30, with:

The strain V5HXT1-7  $\Delta$  HXT3 (Fermichamp) D KanMX571-650 was created by transformation of the strain V5HXT1-7  $\Delta$  HXT3 (Fermichamp) with a PCR DNA product that contained the KanMX gene flanked by HXT3 Fermichamp sequence. This DNA fragment was obtained by PCR amplification using the PUG6 plasmid that carries the KanMX gene (Güldener et al., 1996. Nucleic Acids Res. 24, 2519-2524) as DNA matrix.

Replace the paragraph starting at page 15, line 8, with:

A strain expressing the chimera HXT3V5TM3-6 was obtained by amplifying an HXT3 fragment, coordinates 397 to 818, using primers IA397-416 and IA818-798 (Table [[5]]4), from the V5 strain DNA and transformation of the strain V5HXT1-7  $\Delta$  HXT3 (Fermichamp)  $\Delta$  KanMX571-650 with the PCR product. Transformants were selected on the YPD medium. The resulting strain express an HXT3 protein which sequence is encoded by Fermichamp HXT3 gene except from nucleotides 397 to 818 (aa 132 to 272) encoded by V5 HXT3 sequence. This corresponds to the replacement of the two mutated amino acids A200 and V209 of Fermichamp HXT3 by the standard amino acids T200 and I209.

Replace the paragraph starting at page 15, line 17, with:

A strain expressing the chimera HXT3FmpTM7-9 was obtained by PCR amplification of an HXT3 fragment, coordinates 973 to 1232, using primers IIIC973-992 and IIIC1232-1213 (Table [[5]]4), from Fermichamp DNA and transformation of the strain V5 HXT1-7  $\Delta$  HXT3(V5)  $\Delta$  KanMX1107-1157. Transformants were selected on

the medium YPD. The resulting strain express an HXT3 protein which sequence is encoded by V5 HXT3 gene except from nucleotides 973 to 1232 (aa 325 to 410) which is encoded by Fermichamp HXT3 sequence. This corresponds to the introduction of 3 mutated amino acids of Fermichamp M388, W389, V392 in the standard HXT3 sequence.

Replace the paragraph starting at page 15, line 26, with:

A strain expressing the chimera HXT3FmpTM7-9L9 was obtained by PCR amplification of an HXT3 fragment, coordinates 973 to 1280, using primers IID 973-992 and IID1 1280-1261 (Table [[5]]4), from the Fermichamp DNA and transformation of the strain V5 HXT1-7  $\Delta$  HXT3 (V5)  $\Delta$  KanMX1107-1157. Transformants were selected on the medium YPD. The resulting strain express an HXT3 protein which sequence is encoded by V5 HXT3 gene except from nucleotides 973 to 1280 (aa 325 to 427) which is encoded by Fermichamp HXT3 sequence. This corresponds to the introduction of 5 mutated amino acids of Fermichamp M388, W389, V392, Q414, N415 in the standard HXT3 protein sequence.

Replace the heading at page 16, line 1 with:

Table [[5]]4. Primers used to amplify HXT3 DNA (SEQ ID NOS:13-18)

Replace the paragraph starting at page 16, line 8, with:

The HXT3 coding DNA was PCR amplified from genomic Fermichamp DNA using the primers BamHXT3ATG\_F and HindHXT3STOP\_R (Table [[6]]5). These primers allowed the amplification of the complete ORF and added a BamHI restriction site at the 5' end and a HindIII site at the 3' end of HXT3 sequence. The pUC19 DNA and the amplified HXT3 Fermichamp DNA were digested with BamHI and HindIII restriction enzymes, purified and used for ligation. The ligation mixture was used to transform E. coli, DH5a.

Replace the paragraph starting at page 16, line 21, with:

The couple of oligonucleotides FmpT200-F and FmpT200-R (Table [[6]]5) was used for site directed mutagenesis to create the construct HXT3FmpT200. This led to

the replacement of the A200 of the Fermichamp HXT3 sequence by the standard amino acid T200 of HXT3 (Fig. 12).

Replace the paragraph starting at page 16, line 25, with:

The couple of oligonucleotides Fmpl209-F and Fmpl209-R (~~table 6~~Table 5) was used for site directed mutagenesis to create the construct HXT3Fmpl209. This led to the replacement of the V209 of the Fermichamp HXT3 sequence by the standard amino acid I209 of HXT3 (~~Fig.~~Figure 12).

Replace the paragraph starting at page 17, line 2, with:

The mutated HXT3 genes were PCR amplified using the primers IA 397-416 and IA 818-798 (Table ~~[[5]]~~4), the PCR product was used for transformation of the strain V5HXT1-7  $\Delta$  HXT3 (Fermichamp)  $\Delta$  KanMX571-650. The transformed strains were selected on a YPD medium. Two strains were obtained. One expressed the construct HXT3FmpT200 and is designed as V5HXT1-7  $\Delta$  -HXT3FmpT200. The other expressed the construct HXT3Fmpl209 and is designed as V5HXT1-7  $\Delta$  -HXT3Fmpl209.

Replace the heading at page 17, line 8 with:

Table ~~[[6]]~~5. Primers used for cloning HXT3 in pUC19 and for point mutagenesis (SEQ ID NOS:19-24)

**IN THE SEQUENCE LISTING**

Kindly enter the attached Sequence Listing in lieu of the original.

Paper and computer readable forms of the Sequence Listing do not add new matter, and their contents are the same. It is respectfully submitted that the attached complies with 37 CFR § 1.821 et seq. Otherwise, prompt notice of any defects in the Sequence Listing is earnestly solicited and additional time is requested to comply.